CLAIMS

We claim:

1. An absorbent article comprising:
   (a) an outer cover;
   (b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;
   (c) an absorbent body that is located between the bodyside liner and the outer cover; and
   (d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 40 to about 95 percent by weight of emollient, from about 0.1 to about 40 percent by weight of viscosity enhancer and from about 0.1 to about 20 percent by weight of decoupling polymer.

2. The absorbent article of claim 1, wherein the composition has a high shear viscosity less than about 5,000 centipoise at a temperature greater than about 60°C and has a low shear viscosity greater than about 50,000 centipoise at a temperature of about 55°C.

3. The absorbent article of claim 1, wherein the emollient of the composition is selected from petrolatum, vegetable based oils, mineral oils, dimethicone, lanolin, glycerol esters, alkoxylated carboxylic acids, alkoxylated alcohols, fatty alcohols and mixtures thereof.

4. The absorbent article of claim 1, wherein the viscosity enhancer of the composition is selected from polyolefin resins, lipophilic/oil thickeners, ethylene/vinyl acetate copolymers, organically modified clays, polyethylene, silica, silica silylate, silica methyl silylate, colloidal silicone dioxide, alkyl hydroxy ethyl cellulose, microcrystalline wax, shellac wax, hexadecyl cosanyl hexacosanate, C_{20}-C_{40} alkyl hydroxystearyl stearate, glycol montanate, ozokerite wax, polyperfluoromethylisopropylether montan wax and mixtures thereof.

5. The absorbent article of claim 1, wherein the decoupling polymer of the composition is selected from homopolymers of acrylic acid, acrylic acid/maleic acid copolymers, poly(2-hydroxyethylacrylate), polysaccharides, cellulose ethers, polyglycerols,

polyacrylamides, polyvinyl alcohol/polyvinyl ether copolymers, poly(sodium vinyl sulfonate), poly(2-sulphato ethyl methacrylate), poly(acrylamidomethyl propane sulphonate) and mixtures thereof.

6. The absorbent article of claim 1 wherein the composition further includes from about 5 to about 59 percent by weight of solidifying agent.

7. The absorbent article of claim 6, wherein the solidifying agent is selected from beeswax, behenyl behenate, behenyl benzoate, branched esters, candelilla wax, carnauba wax, synthetic carnauba wax, PEG-12 carnauba wax, cerasin, microcrystalline wax, hydrogenated microcrystalline wax, hexadecylcosanyl hexacosanate, polyperfluoromethylisopropylether montan wax, alkylmethylsiloxanes, glycol montanate, jojoba wax, lanolin wax, ozokerite, paraffin, synthetic paraffin, polyethylene, C_{20}-C_{40} alkyl hydroxystearyl stearate, C_{30} alkyl dimethicone, cetyl esters, zinc stearate, shellac wax, hydrogenated cottonseed oil, hydrogenated squalene, hydrogenated jojoba oil and mixtures thereof.

8. The absorbent article of claim 1 wherein the composition further includes from about 0.1 to about 59 percent by weight of natural fats or oils.

9. The absorbent article of claim 8, wherein the natural fat or oil is selected from Avocado Oil, Apricot Oil, Babassu Oil, Borage Oil, Camellia Oil, Canola Oil, Castor Oil, Coconut Oil, Corn Oil, Cottonseed Oil, Evening Primrose Oil, Hydrogenated Cottonseed Oil, Hydrogenated Palm Kernel Oil, Maleated Soybean Oil, Meadowfoam Oil, Palm Kernel Oil, Peanut Oil, Rapeseed Oil, Safflower Oil, Sphingolipids, Sweet Almond Oil, Tall Oil, Lauric Acid, Palmitic Acid, Stearic Acid, Linoleic Acid, Stearyl Alcohol, Lauryl Alcohol, Myristyl Alcohol, Behenyl Alcohol, Rose Hip Oil, Calendula Oil, Chamomile Oil, Eucalyptus Oil, Juniper Oil, Sandlewood Oil, Tea Tree Oil, Sunflower Oil, Soybean Oil and mixtures thereof.

10. The absorbent article of claim 1 wherein the composition further includes from about 0.1 to about 10 percent by weight of sterols or sterol derivatives.

11. The absorbent article of claim 10, wherein the sterol or sterol derivative is selected from cholesterol, sitosterol, stigmasterol, and ergosterol, as well as, C_{10}-C_{30} cholesterol/lanosterol esters, cholecalciferol, cholesteryl hydroxystearate, cholesteryl

isostearate, cholesteryl stearate, 7-dehydrocholesterol, dihydrocholesterol, dihydrocholesteryl octyldecanoate, dihydrolanosterol, dihydrolanosteryl octyldecanoate, ergocalciferol, tall oil sterol, soy sterol acetate, lanasterol, soy sterol, avocado sterols, sterol esters and mixtures thereof.

12. The absorbent article of claim 1, wherein the composition further includes from about 0.5 to about 20 percent by weight of a rheology modifier.

13. The absorbent article of claim 12, wherein the rheology modifier is selected from silica, silica silylate, silica methyl silylate, quaternary starch compounds, quaternary modified clays, organically modified clays and mixtures thereof.

14. The absorbent article of claim 13, wherein the composition further comprises from about 1 to about 20 by weight of clay selected from natural clays and synthetic analogs of natural clays.

15. An absorbent article comprising:

(a) an outer cover;

(b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;

(c) an absorbent body that is located between the bodyside liner and the outer cover; and

(d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 40 to about 95 percent by weight of emollient, from about 0.1 to about 40 percent by weight of viscosity enhancer and from about 0.1 to about 20 percent by weight of decoupling polymer selected from homopolymers of acrylic acid, acrylic acid/maleic acid copolymers, poly(2-hydroxyethylacrylate), polysaccharides, cellulose ethers, polyglycerols, polyacrylamides, polyvinyl alcohol/polyvinyl ether copolymers, poly(sodium vinyl sulfonate), poly(2-sulphato ethyl methacrylate), poly(acrylamidomethyl propane sulphonate) and mixtures thereof.

16. An absorbent article comprising:

(a) an outer cover;

(b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;

(c) an absorbent body that is located between the bodyside liner and the outer cover; and

(d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 40 to about 95 percent by weight of emollient, from about 0.5 to about 20 percent by weight of rheology modifier and from about 1 to about 20 percent by weight of a clay selected from natural clays and synthetic analogs of natural clays.

17. The absorbent article of claim 16, wherein the rheology modifier is selected from silica, organically modified clays, silica silylate, silica methyl silylate, quaternary modified clays, quaternary starch compounds and mixtures thereof.

18. The absorbent article of claim 16 wherein the natural clay is selected from montmorrillonite, bentonite, hectorite, stevensite, beidellite, saponite, magnesium aluminum silicate and mixtures thereof.

19. An absorbent article comprising:

(a) an outer cover;

(b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;

(c) an absorbent body that is located between the bodyside liner and the outer cover; and

(d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 20 to about 95 percent by weight of emollient, from about 1 to about 40 percent by weight of viscosity enhancer, from about 0.5 to about 20 percent by weight of rheology modifier and from about 1 to about 20 percent by weight of zinc oxide.

20. An absorbent article comprising:

(a) an outer cover;

(b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;

(c) an absorbent body that is located between the bodyside liner and the outer cover; and

(d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 0.1 to about 95 percent by weight of natural

fats or oils, from about 0.1 to about 10 percent by weight of sterols or sterol derivatives, from about 1 to about 95 percent by weight of emollient, from about 0.1 to about 40 percent by weight of viscosity enhancer and from about 0.1 to about 20 percent by weight of decoupling polymer.

21. The absorbent article of claim 20, wherein the composition has a melting point from about 32°C to about 100°C.

22. The absorbent article of claim 20, wherein the composition has a high shear viscosity less than about 5,000 centipoise at a temperature greater than about 60°C and has a low shear viscosity greater than about 50,000 centipoise at a temperature of about 55°C.

23. The absorbent article of claim 20, wherein the composition has a penetration hardness of from about 5 millimeters to about 365 millimeters at 25°C.

24. The absorbent article of claim 20, wherein the composition is on the bodyfacing surface in an amount of from about 0.1 grams per meter squared (g/m2) to about 30 g/m2.

25. The absorbent article of claim 20, wherein the natural fat or oil of the composition is selected from Avocado Oil, Apricot Oil, Babassu Oil, Borage Oil, Camellia Oil, Canola Oil, Castor Oil, Coconut Oil, Corn Oil, Cottonseed Oil, Evening Primrose Oil, Hydrogenated Cottonseed Oil, Hydrogenated Palm Kernel Oil, Maleated Soybean Oil, Meadowfoam Oil, Palm Kernel Oil, Peanut Oil, Rapeseed Oil, Safflower Oil, Sphingolipids, Sweet Almond Oil, Tall Oil, Lauric Acid, Palmitic Acid, Stearic Acid, Linoleic Acid, Stearyl Alcohol, Lauryl Alcohol, Myristyl Alcohol, Behenyl Alcohol, Rose Hip Oil, Calendula Oil, Chamomile Oil, Eucalyptus Oil, Juniper Oil, Sandlewood Oil, Tea Tree Oil, Sunflower Oil, Soybean Oil and mixtures thereof.

26. The absorbent article of claim 20, wherein the sterol or sterol derivative of the composition is selected from cholesterol, sitosterol, stigmasterol, and ergosterol, as well as, C_{10}-C_{30} cholesterol/lanosterol esters, cholecalciferol, cholesteryl hydroxystearate, cholesteryl isostearate, cholesteryl stearate, 7-dehydrocholesterol, dihydrocholesterol, dihydrocholesteryl octyldecanoate, dihydrolanosterol,

dihydrolanosteryl octyldecanoate, ergocalciferol, tall oil sterol, soy sterol acetate, lanasterol, soy sterol, avocado sterols, sterol esters and mixtures thereof.

27. The absorbent article of claim 20, wherein the emollient of the composition is selected from petrolatum, vegetable based oils, mineral oils, dimethicone, lanolin, glycerol esters, alkoxylated carboxylic acids, alkoxylated alcohols, fatty alcohols and mixtures thereof.

28. The absorbent article of claim 20, wherein the viscosity enhancer of the composition is selected from polyolefin resins, lipophilic/oil thickeners, ethylene/vinyl acetate copolymers, organically modified clays, polyethylene, silica, silica silylate, silica methyl silylate, colloidal silicone dioxide, alkyl hydroxy ethyl cellulose, microcrystalline wax, shellac wax, hexadecyl cosanyl hexacosanate, C_{20}-C_{40} alkyl hydroxystearyl stearate, glycol montanate, ozokerite wax, polyperfluoromethylisopropylether montan wax and mixtures thereof.

29. The absorbent article of claim 20, wherein the decoupling polymer of the composition is selected from homopolymers of acrylic acid, acrylic acid/maleic acid copolymers, poly(2-hydroxyethylacrylate), polysaccharides, cellulose ethers, polyglycerols, polyacrylamides, polyvinyl alcohol/polyvinyl ether copolymers, poly(sodium vinyl sulfonate), poly(2-sulphato ethyl methacrylate), poly(acrylamidomethyl propane sulphonate) and mixtures thereof.

30. The absorbent article of claim 20, wherein the composition further includes from about 5 to about 58 percent by weight of solidifying agent.

31. The absorbent article of claim 30, wherein the solidifying agent of the composition is selected from beeswax, behenyl behenate, behenyl benzoate, branched esters, candelilla wax, carnauba wax, synthetic carnauba wax, PEG-12 carnauba wax, cerasin, microcrystalline wax, hydrogenated microcrystalline wax, hexadecylcosanyl hexacosanate, polyperfluoromethylisopropylether montan wax, alkylmethylsiloxanes, glycol montanate, jojoba wax, lanolin wax, ozokerite, paraffin, synthetic paraffin, polyethylene, C_{20}-C_{40} alkyl hydroxystearyl stearate, C_{30} alkyl dimethicone, cetyl esters, zinc stearate, shellac wax, hydrogenated cottonseed oil, hydrogenated squalene, hydrogenated jojoba oil and mixtures thereof.

32. The absorbent article of claim 20, wherein the composition further includes from about 0.5 to about 20 percent by weight of a rheology modifier.

33. The absorbent article of claim 32, wherein the rheology modifier is selected from silica, silica silylate, silica methyl silylate, quaternary starch compounds, quaternary modified clays, organically modified clays and mixtures thereof.

34. The absorbent article of claim 32 wherein the composition further comprises from about 1 to about 20 percent by weight of a clay selected from natural clays and synthetic analogs of natural clays.

35. An absorbent article comprising:

(a) an outer cover;

(b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;

(c) an absorbent body that is located between the bodyside liner and the outer cover; and

(d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 0.1 to about 95 percent by weight of natural fats or oils, from about 0.1 to about 10 percent by weight of sterols or sterol derivatives, from about 1 to about 95 percent by weight of emollient, from about 0.1 to about 40 percent by weight of viscosity enhancer and from about 0.1 to about 20 percent by weight of decoupling polymer selected from homopolymers of acrylic acid, acrylic acid/maleic acid copolymers, poly(2-hydroxyethylacrylate), polysaccharides, cellulose ethers, polyglycerols, polyacrylamides, polyvinyl alcohol/polyvinyl ether copolymers, poly(sodium vinyl sulfonate), poly(2-sulphato ethyl methacrylate), poly(acrylamidomethyl propane sulphonate) and mixtures thereof.

36. An absorbent article comprising:

(a) an outer cover;

(b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;

(c) an absorbent body that is located between the bodyside liner and the outer cover; and

(d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 0.1 to about 95 percent by weight of natural fats or oils, from about 0.1 to about 10 percent by weight of sterols or sterol derivatives, from about 1 to about 95 percent by weight of emollient, from about 0.1 to about 40 percent by weight of viscosity enhancer, from about 0.5 to about 20 percent by weight of rheology modifier and from about 1 to about 20 percent by weight of clay selected from natural clays and synthetic analogs of natural clays.

37. The absorbent article of claim 36, wherein the rheology modifier is selected from silica, organically modified clays, silica silylate, silica methyl silylate, quaternary starch compounds, quaternary modified clays and mixtures thereof.

38. The absorbent article of claim 36 wherein the natural clay is selected from montmorrillonite, bentonite, hectorite, stevensite, beidellite, saponite, magnesium aluminum silicate and mixtures thereof.

39. An absorbent article comprising:

(a) an outer cover;

(b) a liquid permeable bodyside liner that defines a bodyfacing surface and that is connected in superposed relation to the outer cover;

(c) an absorbent body that is located between the bodyside liner and the outer cover; and

(d) a composition on at least a portion of the bodyfacing surface of the bodyside liner that includes from about 0.1 to about 95 percent by weight of natural fats or oils, from about 0.1 to about 10 percent by weight of sterols or sterol derivatives, from about 1 to about 95 percent by weight of emollient, from about 1 to about 40 percent by weight of viscosity enhancer, from about 0.5 to about 20 percent by weight of rheology modifier and from about 1 to about 20 percent by weight of zinc oxide.

40. A method of applying a composition to a bodyfacing surface of a bodyside liner of an absorbent article comprising the steps of:

(a) heating a composition comprising an emollient, a viscosity enhancer and a decoupling polymer, to a temperature above the melting point of the composition, the composition having a melting point of from about 32°C to about 100°C;

(b) applying the composition to the bodyfacing surface of a bodyside liner of an absorbent article; and

(c) resolidifying the composition.

41. The method of claim 40, wherein after the step of resolidification, the composition has a viscosity of greater than about 50,000 centipoise.

42. The method of claim 40, wherein after the step of heating, the composition is applied by spraying.

43. The method of claim 40, wherein after the step of heating, the composition is applied by slot coating.

44. The method of claim 40, wherein after the step of heating, the composition is applied by printing.

45. The method of claim 40, wherein the emollient of the composition is from about 5 to about 95 percent by weight of the composition and is selected from petrolatum, vegetable based oils, mineral oils, dimethicone, lanolin, glycerol esters, alkoxylated carboxylic acids, alkoxylated alcohols, fatty alcohols and mixtures thereof.

46. The method of claim 40, wherein the viscosity enhancer of the composition is from about 0.1 to about 40 percent by weight of the composition and is selected from polyolefin resins, lipophilic/oil thickeners, ethylene/vinyl acetate copolymers, organically modified clays, polyethylene, silica, silica silylate, silica methyl silylate, colloidal silicone dioxide, alkyl hydroxy ethyl cellulose, microcrystalline wax, shellac wax, hexadecyl cosanyl hexacosanate, C20-C40 alkyl hydroxystearyl stearate, glycol montanate, ozokerite wax, polyperfluoromethylisopropylether montan wax and mixtures thereof.

47. The method of claim 40, wherein the decoupling polymer of the composition is from about 1 to about 20 percent by weight of the composition and is selected from homopolymers of acrylic acid, acrylic acid/maleic acid copolymers, poly(2-hydroxyethylacrylate, polysaccharides, cellulose ethers, polyglycerols, polyacrylamides, polyvinyl alcohol/polyvinyl ether copolymers, poly(sodium vinyl

sulfonate), poly(2-sulphato ethyl methacrylate), poly(acrylamidomethyl propane sulphonate) and mixtures thereof.

48. The method of claim 40, wherein the composition further includes from about 5 to about 95 percent by weight of solidifying agent selected from beeswax, behenyl behenate, behenyl benzoate, branched esters, candelilla wax, carnauba wax, synthetic carnauba wax, PEG-12 carnauba wax, cerasin, microcrystalline wax, hydrogenated microcrystalline wax, hexadecylcosanyl hexacosanate, polyperfluoromethylisopropylether montan wax, alkylmethylsiloxanes, glycol montanate, jojoba wax, lanolin wax, ozokerite, paraffin, synthetic paraffin, polyethylene, C_{20}-C_{40} alkyl hydroxystearyl stearate, C_{30} alkyl dimethicone, cetyl esters, zinc stearate, shellac wax, hydrogenated cottonseed oil, hydrogenated squalene, hydrogenated jojoba oil and mixtures thereof.

49. The method of claim 40 wherein the composition further includes from about 0.1 to about 95 percent by weight of natural fats or oils selected from Avocado Oil, Apricot Oil, Babassu Oil, Borage Oil, Camellia Oil, Canola Oil, Castor Oil, Coconut Oil, Corn Oil, Cottonseed Oil, Evening Primrose Oil, Hydrogenated Cottonseed Oil, Hydrogenated Palm Kernel Oil, Maleated Soybean Oil, Meadowfoam Oil, Palm Kernel Oil, Peanut Oil, Rapeseed Oil, Safflower Oil, Sphingolipids, Sweet Almond Oil, Tall Oil, Lauric Acid, Palmitic Acid, Stearic Acid, Linoleic Acid, Stearyl Alcohol, Lauryl Alcohol, Myristyl Alcohol, Behenyl Alcohol, Rose Hip Oil, Calendula Oil, Chamomile Oil, Eucalyptus Oil, Juniper Oil, Sandlewood Oil, Tea Tree Oil, Sunflower Oil, Soybean Oil and mixtures thereof.

50. The method of claim 40 wherein the composition further includes from about 0.1 to about 10 percent by weight of sterols or sterol derivatives selected from cholesterol, sitosterol, stigmasterol, and ergosterol, as well as, C_{10}-C_{30} cholesterol/lanosterol esters, cholecalciferol, cholesteryl hydroxystearate, cholesteryl isostearate, cholesteryl stearate, 7-dehydrocholesterol, dihydrocholesterol, dihydrocholesteryl octyldecanoate, dihydrolanosterol, dihydrolanosteryl octyldecanoate, ergocalciferol, tall oil sterol, soy sterol acetate, lanasterol, soy sterol, avocado sterols, sterol esters and mixtures thereof.

51. The method of claim 40, wherein the composition further includes from about 0.5 to about 20 percent by weight of a rheology modifier selected from silica, silica silylate,

silica methyl silylate, quaternary starch compounds, quaternary modified clays, organically modified clays and mixtures thereof.

52. The method of claim 51, wherein the composition further includes from about 1 to about 20 percent by weight of clay selected from natural clays and synthetic analogs of natural clays.

53. A method for protecting the skin barrier on a skin surface of a user, comprising the steps of:

a) contacting the skin surface of the user with a bodyfacing surface of a liner material, the bodyfacing surface having a composition comprising an emollient, a viscosity enhancer and a decoupling polymer;

b) maintaining the bodyfacing surface in contact with the skin surface for a sufficient amount of time to transfer the composition to the skin surface; and

c) repeating the contact of the skin surface with the bodyfacing surface of the liner material for a sufficient period of time to enhance skin barrier function,

wherein the composition comprises from about 1 to about 95 percent by weight of an emollient, from about 1 to about 40 percent by weight of a viscosity enhancer and from about 0.1 to about 20 percent by weight of a decoupling polymer selected from homopolymers of acrylic acid, acrylic acid/maleic acid copolymers, poly(2-hydroxyethylacrylate), polysaccharides, cellulose ethers, polyglycerols, polyacrylamides, polyvinyl alcohol/polyvinyl ether copolymers, poly(sodium vinyl sulfonate), poly(2-sulphato ethyl methacrylate), poly(acrylamidomethyl propane sulphonate) and mixtures thereof.

54. The method of claim 53, wherein the composition has a melting point from about 32°C. to about 100°C.

55. The method of claim 53, wherein the composition has a viscosity greater than about 50,000 centipoise at a temperature of about 55°C.

56. The method of claim 53, wherein the composition has a penetration hardness of from about 5 to about 365 millimeters at 25°C.